# A Project Report

on

## E-LEARNING MANAGEMENT SYSTEM

***Submitted in partial fulfillment of the***
***requirement for the award of the degree of***

# Bachelor of Technology

GALGOTIAS UNIVERSITY
(Established under Galgotias University Uttar Pradesh Act No. 14 of 2011)

**Under The Supervision of**
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**SCHOOL OF COMPUTING SCIENCE AND ENGINEERING**
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**
**GALGOTIAS UNIVERSITY, GREATER NOIDA**
**INDIA**
**DECEMBER,2021**

# SCHOOL OF COMPUTING SCIENCE AND ENGINEERING
# GALGOTIAS UNIVERSITY, GREATER NOIDA

## CANDIDATE'S DECLARATION

We hereby certify that the work which is being presented in the the project entitled **"E - LEARNING MANAGEMENT SYSTEM"** in partial fulfillment of the requirements for the award of the Bachelor Of Technology submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, is an original work carried out during the period of September 2021 to December 2021, under the supervision of Mr.G.Nagarajan, Assistant Professor, Department of Computer Science and Engineering/Computer Application and Information and Science, of School of Computing Science and Engineering ,Galgotias University, Greater Noida.

The matter presented in the project has not been submitted by us for the award of any other degree of this or any other places.

Lakhan Singh, 19SCSE10101617

Aman Kumar,19SCSE1010606

This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Mr. G. Nagarajan
Assistant Professor

## CERTIFICATE

The Final Project Viva-Voce examination of LAKHAN SINGH and AMAN KUMAR has been held on _____ and his/her work is recommended for the award Bachelor of Technology.

**Signature of Examiner(s)**

**Signature of Supervisor(s)**

**Signature of Project Coordinator**

**Signature of Dean**

Date:
Place: Greater Noida

## Acknowledgement

Apart from my efforts, the success of any project depends largely on the encouragement and guidelines of many others. We take this opportunity to express my gratitude to the people who have been instrumental in the successful completion of this project.

I would like to show my greatest appreciation to Mr.G. Nagarajan our supervisor and the entire faculty of the department of Computer Science (Galgotias University) from where we have learnt the basics of Computer Science and whose informal discussions and able guidance became light for us in the entire duration of this work.

I can’t say thank you enough for their tremendous support and help. I feel motivated and encouraged every time I work on this project meeting. Without their encouragement and Guidance this project would not have materialized.

The guidance and support received from the members who contributed and who are contributing to this project are vital for the success of the project.
I am grateful for their constant support and efforts.

# ABSTRACT

A Learning Management System (LMS) is a term used to describe software products. Designed to manage user learning interventions. LMS is a web-based technology used to plan, implement and assess a specific process of learning. LMS also referred as Course Management System (CMS) provide workspaces to facilitate information sharing and communication among students and lecturers to participate course activities. Educators/Mentors are able to transmit information to students, produce content material, prepare assignments and tests, engage in discussions, manage distance learning and enable collaborative learning using forums, chats and news services.

Several examples of popular LMS are Udemy, BYJU's, Blackboard, WebCT and Moodle. Recently, Moodle, an acronym for Modular Objectoriented Dynamic Learning Environment has become one of the most commonly used LMS.

Moodle (2008) is a free LMS that enable the creation of powerful, flexible and engaging online courses and experiences. Several e-learning researches have been conducted in order to take advantage of Moodie's performance. Graf, 2007 extend Moodle capability by implementing adaptation of the learning material based on the student's learning style. A standalone tool for automatic detection of learning styles in LMS has been implemented. E-learning systems developed using Moodle accumulate an enormous amount of information which is very valuable for analyzing students' behavior and could create a gold mine of educational data.

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# CHAPTER-1
# INTRODUCTION

The Learning Management System (LMS) is a classroom management, communication and interactive tool used in higher education to facilitate classroom and online learning activities. However, new developments in teaching and learning resulting from the rapid development of web technologies, the use of social learning software and advanced learning tools have led to the failure of the standard LMS. Therefore, the LMS infrastructure must be upgraded to include a variety of learning media, informal and formal learning environments as well as new ways to store and share information to meet modem progress in teaching and learning.

Learning Management System (LMS) is a web-based software or technology program used to plan, implement and evaluate a specific learning process. It is used for eLearning processes and, as a general rule, consists of two components: a server that performs the basic function and a user interface that is used by instructors, students and administrators.

Typically, a learning management system provides the instructor with a way to create and deliver content, monitor student engagement and evaluate student performance. The learning management system can also empower students to use features such as series discussions, video conferencing and discussion forums.

LMS are commonly used by businesses of all sizes, national government institutions, local governments, general education institutions and online / eLearning-based institutions. Programs can improve traditional education methods, while also saving organizations time and money. An effective system will allow educators and administrators to manage issues such as user registration, content, calendars, user access, communications, certificates and notifications.

The Advanced Distance Learning team, sponsored by the United States Department of Defense, developed a set of specifications called the Shareable Content Object Reference Model (SCORM) to promote the formation of learning management systems.

# CHAPTER-2
# LITERATURE REVIEW

E-studying structures provide solutions that deliver information and data, facilitate getting to know, and boom performance by means of developing suitable information go with the flow inner organizations (Menolli et al. 2020), placing into practice and as it should be managing technological answers, techniques, and sources are important for the green usage of e-getting to know in an company. Examples of e-getting to know systems which have been broadly followed through numerous organizations are Canvas, Blackboard, and Moodle. Such systems offer innovative offerings for college students, personnel, managers, instructors, institutions, and other actors to support and enhance the getting to know processes and facilitate efficient expertise waft. Functionalities, which includes growing modules to arrange mini path data and mastering substances or verbal exchange. Channels along with chat, forums, and video exchange, permit instructors and managers to broaden suitable training and information change. Nowadays, the utilization of diverse e-gaining knowledge of abilities is a commodity for supporting organizational and administrative center getting to know. Such learning refers to education or expertise improvement (additionally recognized inside the literature as studying and development, HR improvement, and corporate schooling that takes place inside the context of labor.

Preceding research have centered on evaluating e-1 earning structures that utilize diverse fashions and frameworks, in particular, the development of adulthood models, such as the e-learning capability adulthood model, addresses technology-oriented issues by overcoming the restrictions of the domain-precise models or greater ordinary lenses along with the e-studying maturity model. The aforementioned models are very applicable due to the fact that they cognizance on assessing the organizational skills for sustainably developing, deploying, and retaining e-learning, especially, the eLCMM specializes in assessing the adulthood of adopting e-getting to know structures and provides a remarks building block for enhancing beginners studies. Our proposed literature evaluate builds at the previously mentioned fashions, lenses, and empirical research, and it presents a assessment of research on e-mastering competencies with the purpose of enhancing organizational gaining knowledge of so one can complement the findings of the set up models and manual destiny studies.

E-mastering structures can be categorised into different sorts, depending on their functionalities and affordances. One very famous e-getting to know kind is the learning control system (LMS), which incorporates a virtual lecture room and

collaboration abilities and permits the teacher to layout and orchestrate a route or a module. An LMS can be either proprietary (e.g., Blackboard) open supply (e.g.Moodle), these two types fluctuate in their features and the offerings they offer, for example, proprietary structures prioritize evaluation gear for instructors, while open-source structures cognizance extra on community development and engagement tools, further to LMS, e-getting to know systems may be classified primarily based on who controls the pace of learning, for example, an institutional mastering surroundings (ILE) is furnished through the business enterprise and is typically used for teacher-led publications, at the same time as a non-public gaining knowledge of environment (PLE) is proposed by means of the organisation and is controlled individually (.e., learner-led courses). Many e-mastering structures use a hybrid version of ILE and PLE that lets in agencies have both teacher-led or self-paced guides

Except the controlled e-mastering systems, companies were using environments together with social media, massive open on line guides (MOOCs) and different net-based environments to boost their organizational mastering capacity, those structures were applied via one of a kind kinds of generation (eg, laptop programs, mobile) that leverage the diverse abilities presented (e.g., social learning, VR, collaborative structures, smart and intelligent help) to reinforce the mastering and information drift ability of the enterprise, although there’s a growing body of research on e-mastering structures for organizational learning because of the increasingly more tremendous position of competencies and understanding development in groups, the position and alignment of the competencies of the diverse e-studying systems with the expected competency improvement stays underexplored.

# CHAPTER-3
# PROJECT DESIGN WITH DIAGRAMS

**3.1** System Design of E-learning Management System

In this phase, a logical system is built which fulfils the given requirements. Design phase of software development deals with transforming the client's requirements into a logically working system. Normally, design is performed in the following in the following two steps:

1.Primary Design Phase:

In this phase, the system is designed at block level. The blocks are created on the basis of analysis done in the problem identification phase. Different blocks are created for different functions emphasis is put on minimizing the information flow between blocks.

Thus, all activities which require more interaction are kept in one block.

2. Secondary Design Phase:

In the secondary phase the detailed design of every block is performed.

**3.2** General task involved in the design process are following:

**A**. Design various blocks for overall system processes.

**B.** Design smaller, compact and workable modules in each block

**C**. Design various database structures.

**D**. Specify details of programs to achieve desired functionality.

**E.** Design the form of inputs, and outputs of the system.

**F**. Perform documentation of the design.

**G**. System reviews.

**3.3**Project Planning:

Software project plan can be viewed as the following.

1) Within the organization: How the project is to be implemented? What are various constraints (time, cost, and staffs) What is market strategy?

2) With respect to the customer: weekly or timely meetings with the customer with presentation on status reports. Customer's feedback is also taken and further modification and developments are done. Project milestones and deliverables are also presented to the customer.

**3.4** For a successful software project the following steps can be followed:

- Select a project
    - Identifying project's aims and objectives.
- . Understanding requirements and specification
    - Methods of analysis, design and implementation
- Testing techniques
- Documentation
- Project milestones and deliverables
- Project milestones
- Budget allocation o Exceeding limits within control
- Cost
- Time
- Size of code
- Resource allocation
    a. Hardware

b. Software
c. relevant project information

- Digital Library
- Risk Management

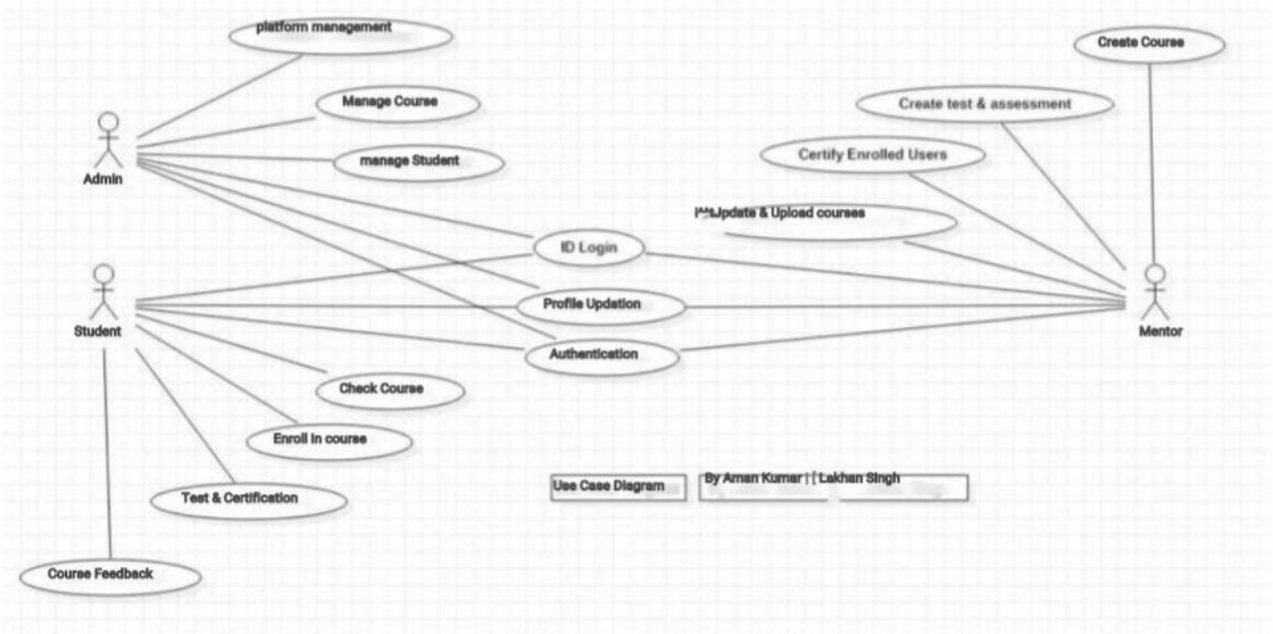
a. Risk avoidance

b. Risk detection

**Use Case Model of the Project:**

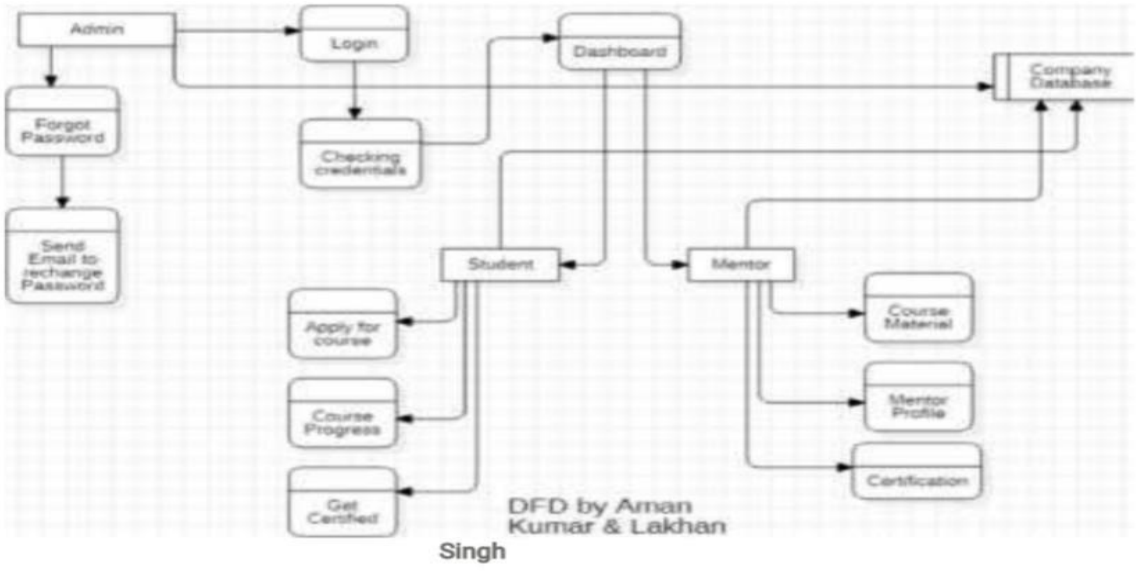
The use case model for any system consists of use cases". Use cases represent different ways in which the system can be used by the user. A simple way to find all the use case of a system is to ask the questions "What the user can do using the system? The use cases partition the system behavior into transactions such that each transaction performs some useful action from the user point of view,

The purpose of the use case to define a piece of coherent behavior Without revealing the internal structure of the system. An use case typically represents a sequence of of interaction between the user and the system. These interactions consists of one main line sequence is represent the normal interaction between the user and the system. The use case model is an important analysis and design artifact (task). Use cases can be represented by drawing a use case diagram and writing an accompany text elaborating the drawing.
In the use case diagram each use case is represented by an ellipse with the name of use case written inside the ellipse All the ellipses of the system are enclosed with in a rectangle which represents the system boundary. The name of the system being module appears inside the rectangle. The different users of the system are represented by using stick person icon. The stick person icon is normally referred to as an Actor. The line connecting the actor and the use cases is called the communication relationship. When a stick person icon represents an external system it is annotated by the stereo system.




## DFD Diagram:

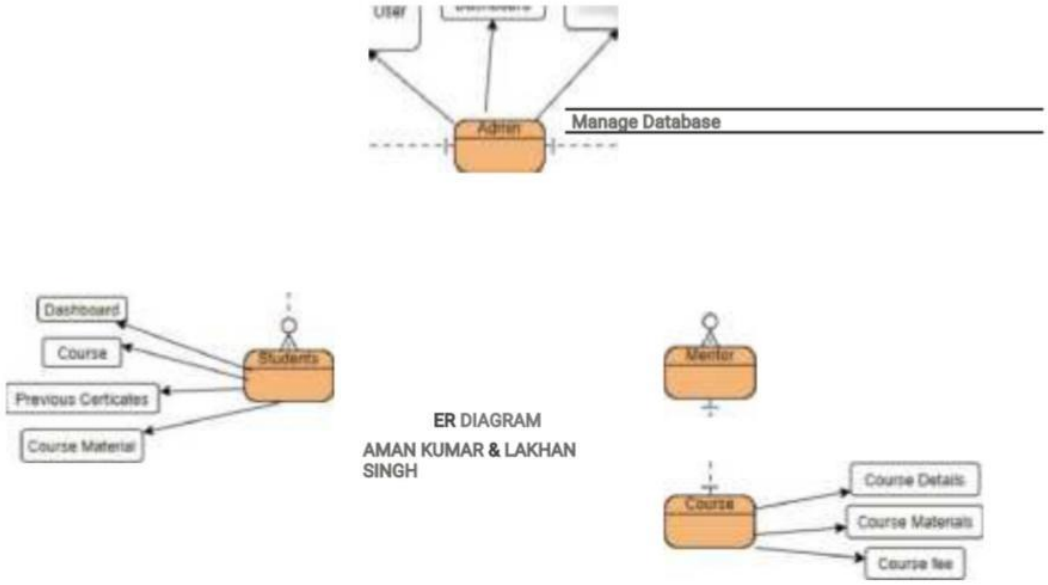
A data-flow diagram is a way of representing a flow of data through a process or a system (usually an information system). The DFD also provides information about the outputs and inputs of each entity and the process itself. A data-flow diagram has no control flow there are no decision rules and no loops. Specific operations based on the data can be represented by a flowchart.



**ER Diagram:**

An entity-relationship model (or ER model) describes interrelated things of interest in a specific domain of knowledge. A basic ER model is composed of entity types (which classify the things of interest) and specifies relationships that can exist between entities.

ER model is commonly formed to represent things a business needs to remember in order to perform business processes. ER model defines a data or information structure which can be implemented in a database, typically a relational database.



# CHAPTER-4
# MODULES DESCRIPTION

- Assignment Management Module: Used for managing the Assignment details

- QUESTION Module :Used for managing the details of QUESTION
- CLASS Module: Used for managing the details of CLASS
- Student Management Module: Used for managing the information and details of the student
- TEACHER Module: Used for managing the TEACHER details
- QUIZ Module: Used for managing the QUIZ Information's
- Login Module: Used for managing the login details.
- Users Module: Used: managing the users of the system.

**Focused Modules:**

***Registration***: In this first the interested students get registered by selecting their desired username and passsword and by providing the necessary details, then each user profile will be maintained which can be edited by the user when desired. Each person will register only one time. Details of each person along with their username and password is saved permanently in the database.

***Login***: After providing the correct username and password, the user log's in to the e-Learning System's homepage. There the user can select the available subjects to further learn about them. If user enter wrong username or password then they block their account temporary and after some security verification they will able to access their account.

***Homepage***: After providing the correct user name and password, the user log's in to the e-Learning system's homepage. Here at the homepage there are many choice for user to learn different languages like C, C++ Java etc.

User can take following helps:

1. Tutorials about the language

2. View programs in the language.

3. Playing quiz about the language.

4. Download notes and programs.

***Quiz***:- User play the quiz on appropriate language and immediately take the result. On each question user get the marks, there is no negative marking in quiz.

Project on E-learning Management System is to manage the details of Assignment, students TEACHER, QUIZ QUESTION. It manages all the information about CLASS QUESTION, assignment. The project is totally built at administrative end and only the admin garanted the access. The purpose of the project is to build an application program to duce the manual work for managing Assignment, Student, CLASS TEACHER. It tracks all the details about the TEACHER, QUIZ QUESTION.

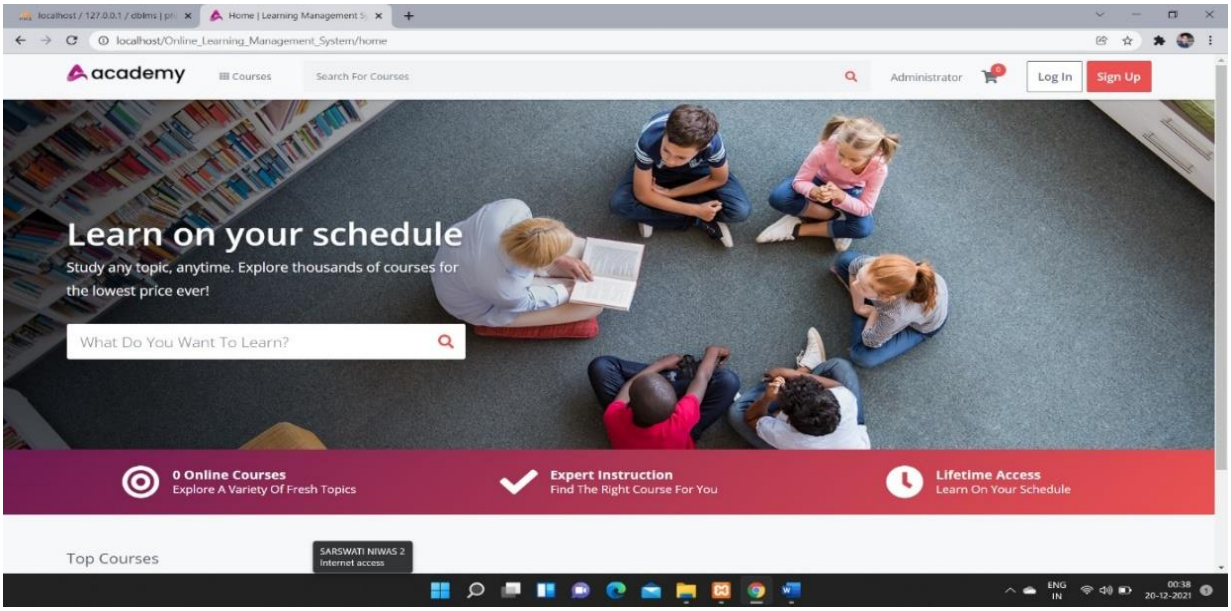
# CHAPTER-5
# RESULT AND DISCUSSION

We have successfully implemented our E-learning management system project. We hope that it'll provide help and to students as well as teachers in the field of learning and education and save their time and other expenditures and increase their flexibility regarding timings and schedule. It'll help the teachers to make continuous reinforcement of content and skills and the students can take lectures by any number of times.

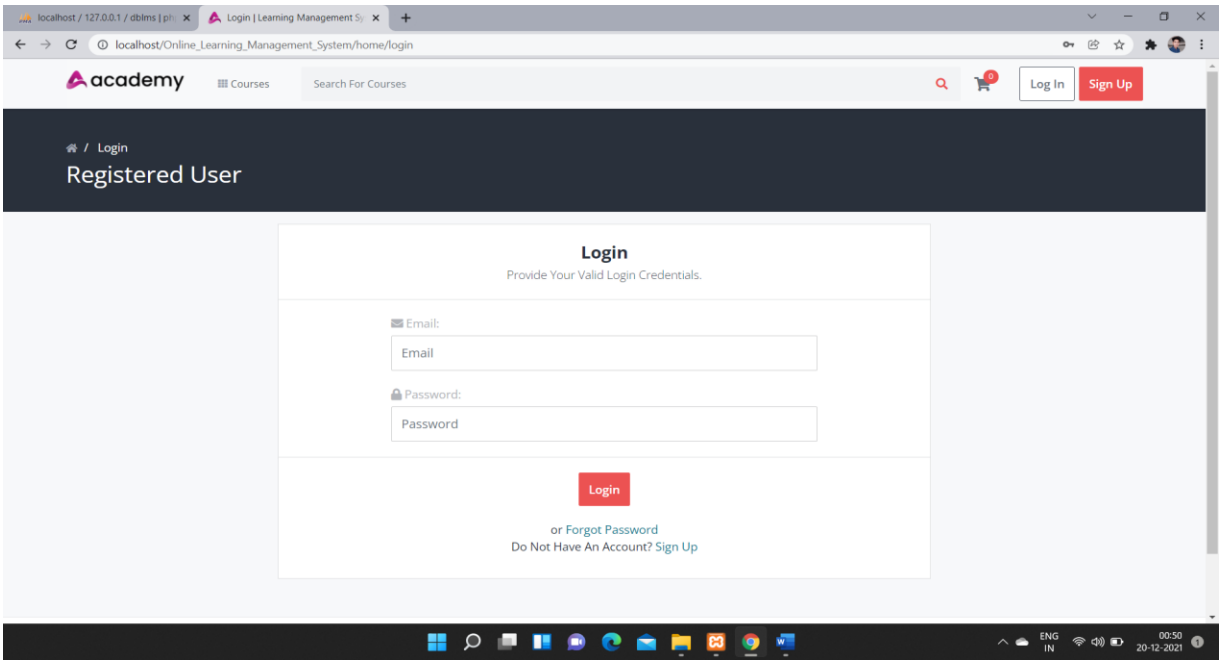
When the teachers and students login on E-learning management system they can get access to various modules of E-learning management and thus performs the operations on various modules according to their needs and demands.

In other words , we can say that an E-learning management system allows the communication of learning objectives and organize learning timelines.

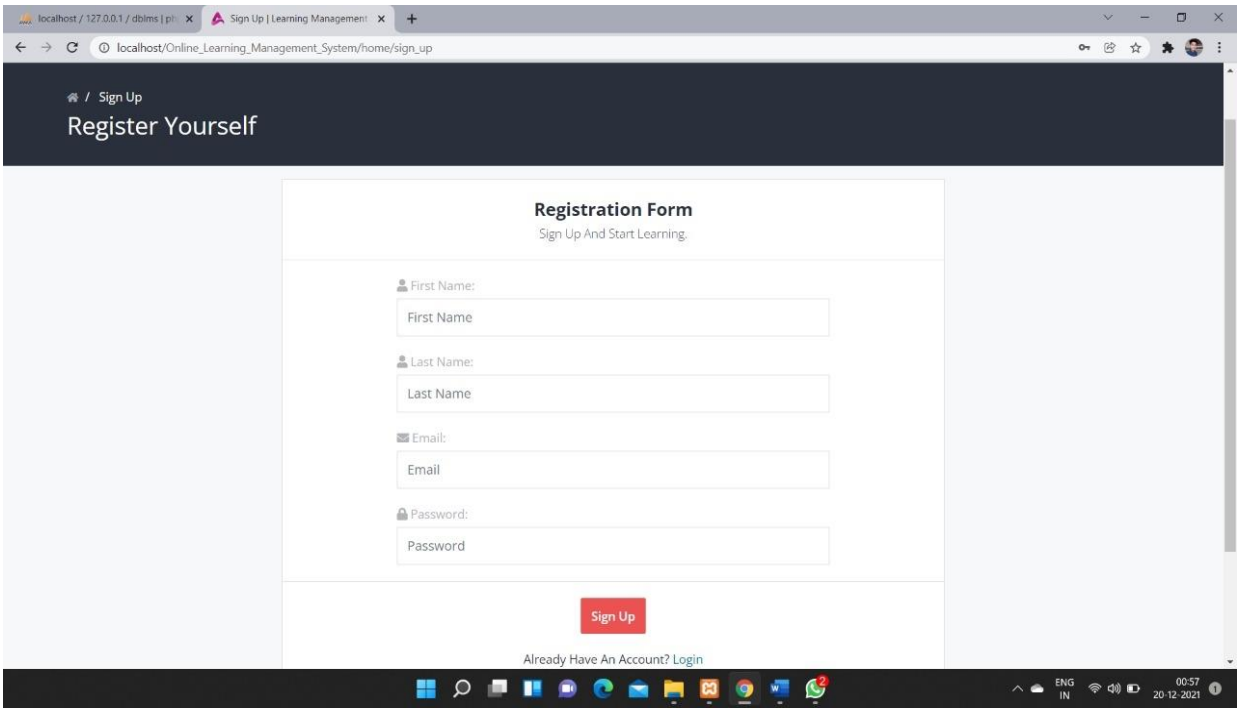
## HOME PAGE:



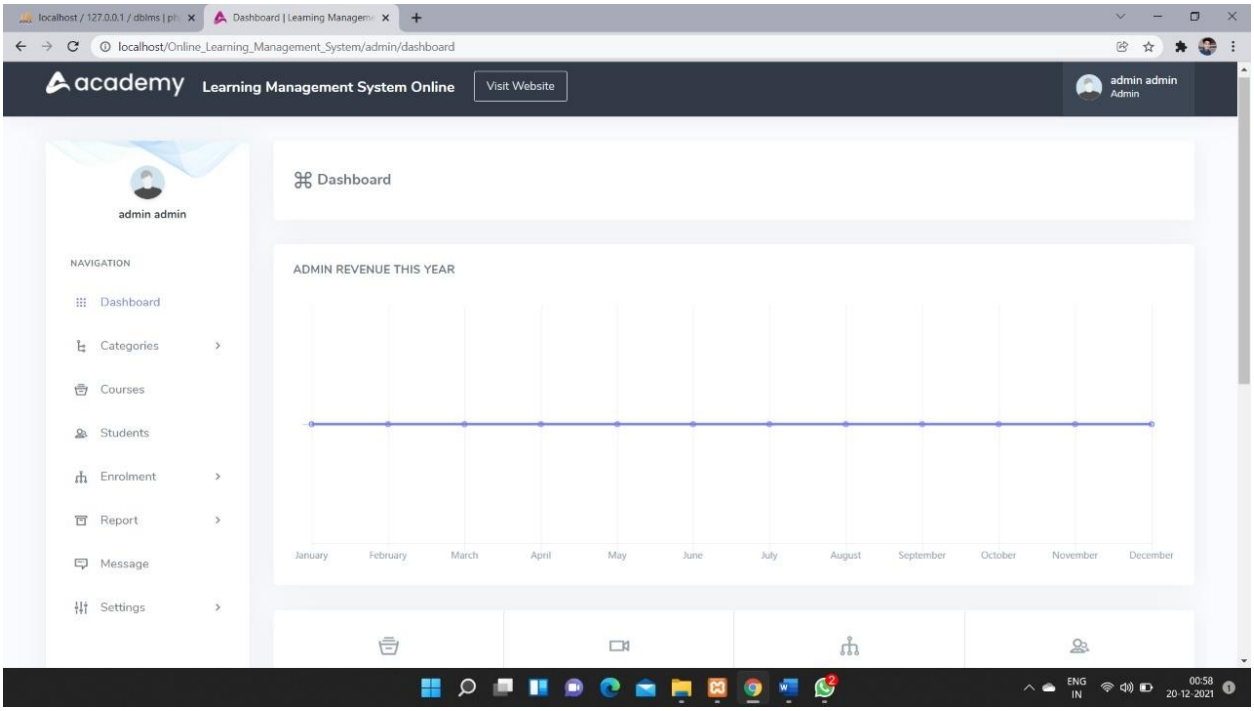
# LOGIN PAGE:



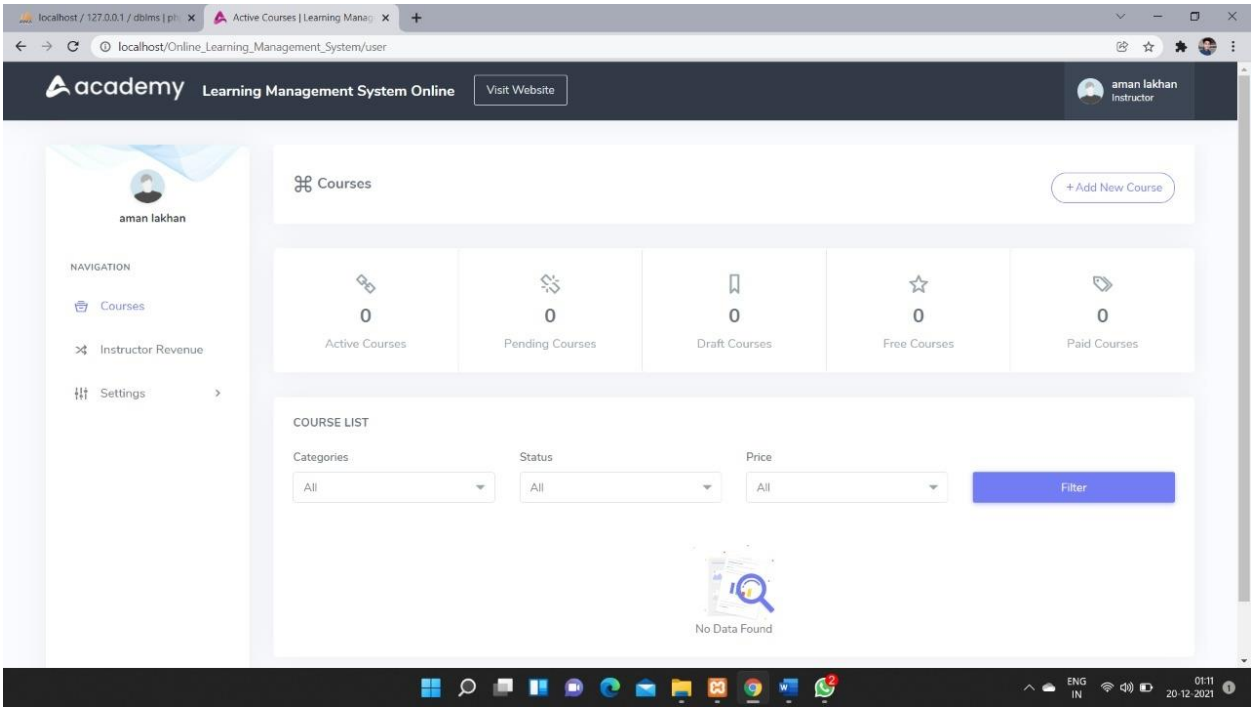

# REGISTRATION FORM:



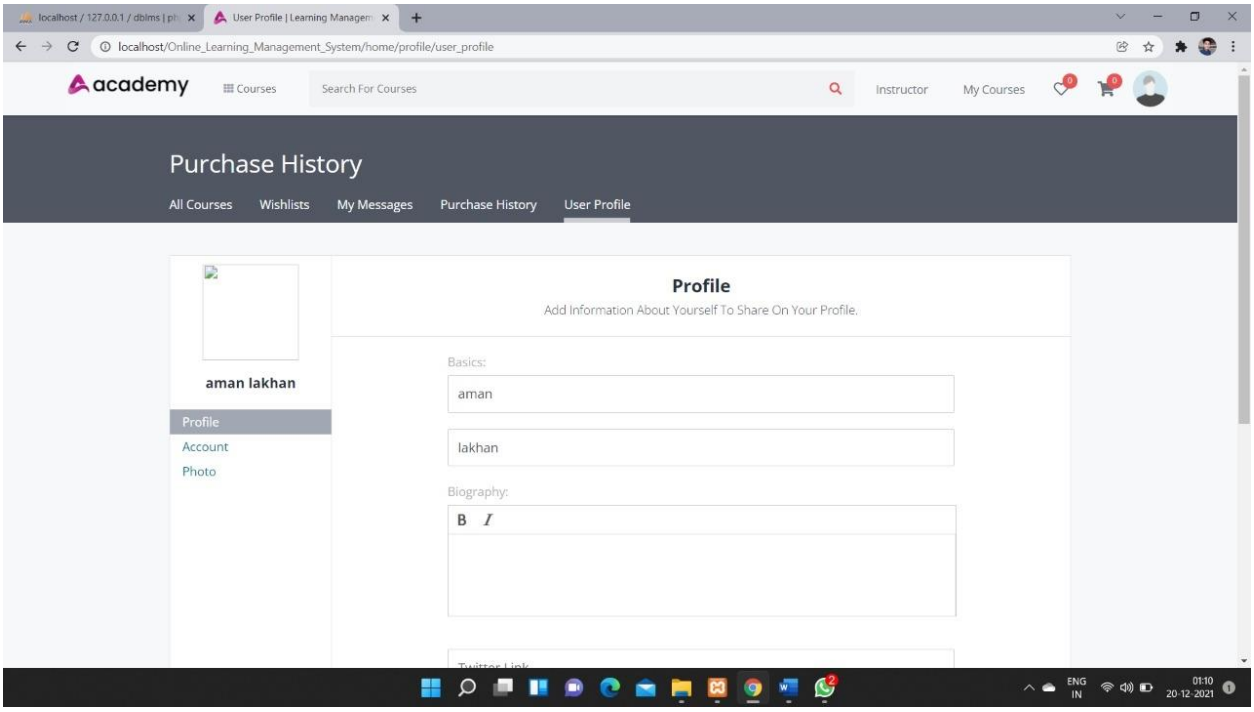
# ADMIN DASHBOARD




# STUDENT DASHBOARD



# STUDENT PROFILE



# CHAPTER-6
# CONCLUSION AND FUTURE SCOPE

## 5.1 Conclusion:

Our project is only a humble venture to satisfy the needs to manage their project work. several user friendly coding have also adopted. This package shall prove to be a powerful package in satisfying all the requirements of the school. The objective of software planning is to provide a framework that enables the manger to make reasonable estimates made within a limited time frame at the beginning of the software project and should be updated regularly as the project progresses

At the end it is concluded that we have made effort on following points .

- A description of the background and context of the project and its relation to work already done in the area.
- Made statement of the aims and objectives of the project.
- The description of Purpose, Scope, and applicability.
- We define the problem on which we are working in the project.
- We describe the requirement Specifications of the system and the actions that can be done on these things.
- We understand the problem domain and produce a model of the system, which
- Describes operations that can be performed on the system.
- We included features and operations in detail, including screen layouts .
- We designed user interface and security issues related to system.
- Finally the system in implemented and tested according to test cases.

## 5.2 Future Scope of the Project:

In a nutshell, it can be summarized that the future scope of the project circles around maintaining information regarding:

- We can add printer in future.
- We can give more advance software for E-learning Management System including more facilities

- We will host the platform on online servers to make it accessible worldwide.

- Integrate multiple load balancers to distribute the loads of the system

- Create the master and slave database structure to reduce the overload of the database queries.

- Implement the backup mechanism taking hackup of cod chase and database on
  regular basis on different servers

The above mentioned points are the enhancements which can be done to increase the applicability and usage of this project. Here we can maintain the records of assignment and Student. Also, as it can be seen that now-a-days the players are versatile, so there is a scope for introducing a method to maintain the E-learning Management System. Enhancements can be done to maintain all the Assignment, Student. TEACHER, QUIZ,QUESTION.

We have left all the options open so that if there is any other future requirement in the system by the user for the enhancement of the system then it is possible to implement them in the last we would like to thanks all the persons involved in the development of the system directly or indirectly. We hope that the project will serve its purpose for which it is develop there by undefining success of process.

**References**: Google scholar, Scribd, Research gate, Wikipedia, etc.